

SPRINKLER WITH NOZZLE FOR UNIFORM FLUID DISTRIBUTION

ABSTRACT

An improved sprinkler nozzle for both above-the ground and pop-up rotary sprinkler systems that controls precipitation rate and water distribution is disclosed. To apply water in a uniform pattern and provide even coverage and distribution of water, one or more steps are included on the internal wall of the nozzle. These steps, together with a decreasing internal diameter toward the fluid outlet end of the nozzle, increase the boundary layer size of fluid within the flow passage of the nozzle and produce a spray pattern that is uniformly distributed over the entire throw radius of the sprinkler. In addition, one or more wedge-shaped fins may also be included within the internal passage of the nozzle to reduce water turbulence and provide increased fluid flow control and uniform water coverage.